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Vol. 3.

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THE INSTRUCTOR,

FOR NOVA SCOTIA, NEW BRUNSWICK, AND PRINCE EDWARD ISLAND.

EDITED BY - - - - ALEXANDER MUNRO,
Bay Verte, New-Brunswick.
All Communications to be addressed to the Editor, POST PAID.

TERMS.—3s. 9d. per annum. Single copies 4d. To Clubs, see Cover.

Vol. 3. FEBRUARY, 1860. No. 2.

Literature and Elementary Instruction in the Middle Ages.—No. 2.

In a former article under this caption, we attempted to show the state of society with reference to literature, during the first four thousand years of the world. We now propose to trace the state of literature and elementary instruction during the first sixteen centuries of the Christian era.

If our object was to detail the wars, bloodshed and devastation, that the pages of ancient history present, our task would be comparatively easy; but to trace the character and extent of useful knowledge, is a herculean task. We have seen that the world, Jewish and heathen, had sunk deep into the depths of darkness. The schools of Greece and Rome, though few in number, and limited in their operations, compared to the wants of the people, were now dwindling into insignificance; the teachings of the Jewish Doctors and Rabbis, were mixed and interwoven with the teachings and customs of the heathen nations; the "schools of the prophets," were not succeeded by schools for the people: in a word, all things truly moral and intellectual lay prostrate at the feet of ignorance and heathenism.

But a new era was about to dawn—the old, with its long train of types, shadows, cymbols, gorgeous appearances, and external forms—mixed as they ultimately were with those of the heathen nations, were about to pass away; and the day-star now began to rise in the midst of a morally and intellectually backward world. The fiat, predicted by a long train of prophets, was now about to be executed; new teachings, new light, in a word, a new dispensation was ushered in.

The New Testament Scriptures, like that of the Old, is generally silent on the subject of Education; the principle adopted by our Saviour and his Apostles, in communicating knowledge, appears to have been by oral teaching. In truth, this appears to have been the general mode of communicating knowledge, until a very late period of the present era. The teachers, under the Jewish, and at the introduction of the Christian Dispensation, having been commission dedi-

rect by God, to publish good news, did not require to be taught in the schools of Greece, in order to communicate the will of Heaven to fallen man; neither was it necessary that those who were privileged to sit at the feet of inspired teachers, should be instructed in Phinecian or Grecian Literature, in order to understand and follow the truth.

But when a full and complete revelation of the will of Heaven was given to man, it became, as in these times, necessary that every son and daughter of Adam should be able to read and understand the Scriptures.

In descending the stream of time, we find that with the exception of the first two or three centuries of the Christian era, which was illuminated by the rays of Gospel light which were shed upon mankind in Apostolic times, that darkness again brooded over the moral elements of the world, and the true knowledge which had been freely bestowed, was almost again extinguished.

The teachings of the Apostles began to be lost sight of; the Roman empire abandoned every legitimate means of educating and cultivating the minds of her vast population: the literature which she had translated from Greece began to decline; conquest became her motto; until the division, and ultimate subdivision of that once powerful empire took place; when she was over-run by hordes of Northern barbarians, who in their madness of conquest, extinguished even the few gleams of intellectual light that had been permitted to shine, though dimly.

The institutions of a country once laid prostrate by war, and the kindred evils connected therewith, overshadowing the land, it requires centuries of peace, and social, moral, and intellectual development, before it can arise out of barbarism and ignorance, into a state of moral and intellectual refinement. The human mind does not pass at once from a high degree of intellectual eminence, like that to which it had attained during the best days of Grecian and Roman History, to an abject state of mental captivity, like that to which it was reduced during the Middle Ages.

We find literature taking its rise in Judea, introduced from thence into Chaldea, where it was cultivated for a time; this nation was overpowered by the Babylonians, the Babylonians by the Assyrians, the Assyrians and Egyptians by the Persians, the Persians by the Greeks, the Greeks by the Romans, and the Romans by the Northern Barbarians. During the best days of these several empires, literature made considerable progress but only for a time; every change in the state introduced a change in the state of literature; during peace knowledge increased, but only to be destroyed by war. We have now arrived at the period of the decline in literature, which was gradual though rapid. The causes by which this revolution in literature was effected, were numerous. The destruction of the Alexandrian library, where were deposited the intellectual treasures of centuries; the disorganized state of society; the rise of Mahomet, who destroyed all the works of the ancients within his grasp, for fear that they would disagree with the Khoran; the the prejudices entertained by many of the fathers of the Christian Church against heathen literature; the progress of superstition; the ignorance and vices of a large portion of the clergy; the sealing up of the remaining works of the ancients from the mass of society in monastic institutions, where they were forgotten; the general decline of manners, and the exclusion of the laity, however exalted their station, from the advantages of education, and means of intellectual improvement. There were many other collateral causes for this decline in useful knowledge, but the above will suffice to lead the reader to see the state of society at this period of our history.

Still in the midst of all this decay,

there arose once in awhile, men, eminent in scholastic attainments; during the first few centuries, there arose not less than forty, the half of whom were fathers in the Christian Church, who figured as scholars, and many of them as writers; and during the time that elapsed between the fourth and sixteenth centuries, there existed upwards of fifty, who figured in the walks of scientific research.

We have seen that during the reign of Mahomet, who acted as a prophet, warrior, general, and conqueror, who subdued the Eastern world, the world of the ancients, into one vast empire, the Saracenic, that literature was almost blotted out of existence; and it was not until a century after his death that the Arabians began to restore the literature of former ages. Their writings may be divided into the imaginative and philosophical; the former of native growth, and the latter of foreign translation. In the latter, they were but the disciples and copyists of the Greeks. However, the literature of Arabia, which never rose to a very high standard, rose and fell with the *Caliphs*, a title assumed by the successors of Mahomet.

In England we have no account of the state of education, except so far as confined to the Abbeys and Colleges, previous to the reign of Alfred, the hero of fifty-six battles. This monarch did, says Russell, about the year 890, "establish schools for the instruction of the ignorant, and enjoined by law all freeholders, possessed of two hides of ground (about two hundred acres) to send their children to school; and he gave preferment, either in Church or State, to such only as had made some proficiency in knowledge."—King Alfred was a close student himself, and composed many useful works "to lead the untutored mind to the love of letters, and bend the heart to the practice of virtue."

At this period some other nations continued to encourage University education to a limited extent; but the mass of society could neither read nor write.

Charlemagne, also, took an interest in the education of the people, and established schools for that purpose; but the schools established by these two monarchs soon dwindled into insignificance, so far as related to the instruction of the common people. Learning at this period was considered dangerous to true piety. The Latin tongue, the principle medium of communication, was but imperfectly known—and the scarcity of parchment, together with the expense of transcribing, rendered books so extensively dear, as to be only within the reach of a few. The effect produced by the establishment of these schools, were soon obliterated, and intellectual darkness again covered the earth, so far as the education of the people was concerned, and any advances made in literature, until the invention of printing, were confined to a few individuals, and to a limited number of subjects, connected principally with the mathematical science.

We are indebted to the Arabians for the introduction of Algebra, Geometry, Trigonometry, Astronomy, Natural Philosophy, and especially for many discoveries and improvements in Arithmetical science. From Arabia, this thirst for literature extended into Europe; and in the twelfth and succeeding century, there arose several Mathematicians and Astronomers. At this time the minds of the mass of society, throughout the world, were grossly ignorant, and literature was entirely expelled from Greece and Egypt, its once great depositories; and now Arabia and Europe began to light the lamps of science. In the latter we find the invention of the Mariner's Compass in the twelfth, and Printing in the fifteenth centuries, were among the great advancements of the age.

The attracting power of the loadstone seems to have been known to the ancients in very remote periods; but its application to the purposes of

navigation and surveying, appears not to have been known previous to the middle or close of the twelfth century. The English, French, Italians, Germans and Chinese, all contend for the honour of this invention.

To whom the honour belongs, it is difficult, and probably impossible, to determine; but its effects on the destinies of the world is stereotyped upon every movement of society; by it an intercourse with transmarine regions, either for purposes of commerce, benevolence, the extension of knowledge, or the spread of Christianity is obtained; and by its means the geography of the globe and its subdivisions are ascertained.

The ancient Babylonians and Chinese are said to have carved letters on blocks of wood and stone; but the invention of printing in its present shape is of European origin, and probably due to Laurentius of Haerlem, improved by Faustus of Mentz, Gutemberg, Schoeffer and others, during this period. It is said of this inestimable discovery—one through the means of which the moral elements of the world were to be revolutionized, and the natural elements developed, that it was brought almost at once to perfection, that the first printing done four hundred years ago, is equal to any that has since been done—showing that in the revolution of the wheels of Providence, that all the great sciences and arts, oral language, written language, the mariner's compass, and printing, are all subordinate instruments, to be wielded by man, under the direction of a wise Providence, and for wise ends. By the first, *oral language*, man has held converse with his God, and with his fellow man; by the second, *written language*, he has been enabled to write the commands of God "in a book," and by means of which the transactions of the world are received; by means of the third, *the Compass*, the commands of Heaven are being promulgated to the most distant and benighted corners of the earth; and by the fourth, *printing*, copies of the Scriptures, and other good works are so multiplied, that "he who runs may read, and he who reads may understand."

In concluding this article, which brings us down through sixteen centuries of our era, the reader will observe that we have not particularized the discoveries made in abstract science, the solution of particular problems in mathematics, astronomy, and other branches of knowledge; we have avoided this course as uninteresting to the general reader, and have confined our remarks to the more leading points of notoriety of the periods.

One thing, however, we have not failed to observe, in tracing mankind through all the mutations to which our race have been subjected, during upwards of five thousand years—that the mass of society, the peasantry of the world, have remained uninstructed in reading, or alphabetical writing,—in a word, the peasantry of the world, with few exceptions, have remained in gross ignorance.

The inhabitants of Great Britain, now so famous for their high state of social, moral, and intellectual culture, were, two thousand years ago, and for centuries after, in a state of barbaric heathenism. North America, now the land of civilization, education and freedom, was, in all probability, two thousand years ago without an inhabitant.

The nations of antiquity, as such, have passed away; accounts of their sayings and doings, their sciences and arts, their great cities, and their literature, are left in vague history's keeping; but Great Britain and North America, the former only mentioned in early history, the latter unknown, are now the two great centres of civilization, moral and intellectual refinement; they are the centres, to which the descendants of those once renowned nations of antiquity are now looking, for relief from bondage, oppression and ignorance.

The Age of Novels.

Ancient Greece and Rome had their ages of fabulous literature, ages in which those nations were deeply sunk in vice and gross superstition; so have we our age of romance; and if we are not so deeply sunk in vice as the nations referred to, it is not to be attributed, by any means, to any real worth these productions possess, or to any power that romantic literature inherits, with regard to the elevation of our race. Our facilities for spreading either good, or pernicious works, or both, are infinitely greater than were those of the ancients.

But it may be said that our fiction takes a higher stand-point, morally considered, than did the fabulous writings of those effeminate nations. In other words, we have ascended higher in the scale of moral truth, and have not descended quite so low in the scale of vice as those once powerful nations did. But that we have descended is beyond dispute. At the restoration of letters in the fifteenth century, our forefathers of that age did not indulge in romance, but on the contrary, a solid and bold literature was introduced in company with Christianity; sound knowledge was the native growth of their own minds, fostered and propagated by influences, which superstition was not able to gainsay or destroy.

The restoration of literature accompanied the revival of Christianity. Christianity never was in any age satisfied to go hand in hand with mythical or romantic literature. In no age of the world has the genus *novel* been more plentifully produced and closely strewed throughout the world, than in the present; and few are the vices of this age that have assumed a more prominent foothold on the mind of society than that of novel reading; and were it not for the counteracting influences—the spread of Bible truth, we should be strongly impressed with the fact, that society would return to the days, when all literature was fabulistic, and all knowledge filled with superstition.

We are told, in the classification of novels, that there are to be found, those that interest, and those that instruct; we have not met with the latter; while the former, from the prevailing taste of the age for the romance is very abundant.

The taste for novel-reading is entirely different from that for standard works; in the former, when, what is called a good moral cannot be procured, those of an inferior grade will do; in other words, a taste for the higher order of novels begets a taste for the lower class; it is quite different with regard to standard works; on reading these remarks, even those of the most common place class, a relish is obtained for those of a higher order; or, in other words, like begets like. The novels which are most generally sought after, are those that possess the greatest amount of dreaming nonsense, and whose real weakness, morally considered, is their highest commendation.

On entering a stationer's shop the first thing that presents itself to the beholder is, a table, to use a modern expression, *groaning* with the most wretched trash; which delineates in the most improper manner, marriages, seductions, burglaries, forgeries, and deaths; in them the most profound mysteries are conjured out of the slenderest materials.

We are told that fiction "consists in the narration of imaginary incidents;" and "the difference between the narrative and the fiction lies in the character of the incidents they respectively relate;" and that "the narrative may be true, while the fiction is created either wholly or in part by the imagination. And the chain of incidents on which a fiction is founded is called its plot."

The advocates of fictious compositions assert, that such writings "constitute one of the most important de-

partments of literature, and that fictious literature exerts a powerful influence on the morals and taste of a nation."

If this *powerful influence* was cast on the side of morality and truth, we would rejoice; but that this powerful influence created by the study of the fictious works extant, is leading a vast portion of society into vice, we have no doubt; these works are filled with wild legends of by-gone ages, heroic exploits of former times, supernatural events, relating to witches, wizards, and hobgoblins, and vagaries of the imagination in general.

A faint idea may be gained of the extent of fictious literature now in circulation, by reference to Mr. Mudie's Library of London, which contained in 1858, 215,054 volumes, 87,480 of which were devoted to fiction.

And in the Athenæum Library, of Providence, United States, consisting of 19300 volumes, nearly one half (9214 volumes) are devoted to fiction.

The love and taste for fiction is on the increase—all classes of the reading portion of society are drifting into its use, and the lowest class of fictious literature is greedily sought after and read with delight, it is, in many families, the Bible of the first day of the week, and the text-book of the other six.

It must require minds exalted above moral infirmities to digest the romantic trash that now floods many of the parlors and libraries of the day.

It is said that one age leaves its impress upon another; and it may be, that the Grecian and Roman age, of fabulistic literature, has left its impress upon the nineteenth century of the Christian era. And if we are to go on, year after year, publishing romantic trash, by thousands of volumes per annum, until the end of the present century, what a flood of forgeries and lies will be transmitted to the next century.

Libraries of Useful Books.

Should be found in every community where a few families are gathered together.

It is admitted that "Knowledge is power," whether wielded right or wrong. That all knowledge should be of the right kind, and used in a proper manner, is all-important. To speak of procuring an enlightened education, and proper knowledge of mankind and things, in these times, without the aid of good books, is simply to talk nonsense.

Then to procure good books and cultivate a habit of reading them, is the bounden duty of every good citizen of the world.

The establishment of libraries, connected with communities and schools, are of comparatively modern date; and their influence upon society is being generally felt. Among the vast number of works issued, many are of a high order, while many others are entirely unfit for use; but justly fit to be committed to the *index expurgatorius*.

Notwithstanding the great number of excellent works extant, and annually being issued from the press, there is a great dearth of books among the mass of society. We often wonder how it is, that the mass of Provincial society is so intelligent, when we consider the great want of books that generally exists. However, we account for much of it, on the borrowing principle, and on the conversational powers and unwillingness to communicate, orally or by reading, that generally prevails.

But these aids are not enough; each community should have a circulating library of standard works, where each member of the community could have his intellectual thirst supplied. The want of such libraries is a serious backdraw to the teachers of elementary schools. Having no library connected with the school, and few, or no books of his own, it is impossible for the teacher to keep pace with the advances of the age, or do his employers justice in communicating knowledge to his pupils. His boarding about from h use to house will not be the means of aiding his operations in the school room. In one house he will find a piano, a few note books, and half a dozen novels, and perhaps a copy of the Scriptures—the latter in so perfect a state as to warrant the conclusion that the novels take the precedence. In another house may be seen half a dozen old almanacs and a few pictures on the walls. In another some of the journals and debates of the House of Assembly. In another a few old books, the property of some great-great-grandfather. And in another, no books at all; and so on, through the district. Surely, both the teachers and the people are to be pitied, who live and die in the midst of such intellectual destitution.

Some one will probably hint, that the above picture is overdrawn; but we can assure our readers that we would not have much difficulty in pointing to several editions, not fictions, but real editions of our short paragraph on intellectual destitution.

Of what incalculable benefit would a good library be in such a community! what an elevation of character it would impart to the people.

Although several libraries have been formed in different sections of the lower Provinces, still the want is great. One might travel thirty, fifty, and almost a hundred miles, without meeting with a circulating library.

And, in New Brunswick, the Board of Education has printed catalogues of books, and promised to supply libraries with the works named; but on enquiry, the books are only to be found in the catalogues, and not on the shelves of the Education Office.

The head of this department, promised long ago, to establish book agencies throughout the different settlements and towns of the Province, where the proprietors of schools, and school committees could be supplied; but so far as we can learn, these agencies are few and far between. And their want, no doubt, prevents the spread of school literature, retards education, and the extension of useful knowledge.

The School law of New Brunswick has now been in operation nearly three years, sufficient time to enable its administrators to carry its provisions into execution. We hope that the powers that be will pay a little more attention to this important matter, and have a good supply of useful books placed in every pariah, or at convenient distances apart, where the public may get supplied.

Map of New Brunswick.

A good Map of New Brunswick, Nova Scotia and Prince Edward Island, showing their position with regard to Canada and the State of Maine, has long been considered a desideratum.

Our families, our schools, and our public libraries, stand much in need of such a map. Those of other countries with whom we are connected in trade, require such a map; in fact, the interests of the Provinces, both at home and abroad, have long felt the want of a full and complete map, on a large scale, of the Lower Provinces.

But the reader may be induced to ask, has not New Brunswick supplied this want? We answer no!

New Brunswick has issued a map, containing itself, the State of Maine,

and a patch of each of the Provinces of Nova Scotia, Prince Edward Island, and Canada. This map has cost us over three thousand pounds, the half of which has probably been expended in compiling a map of Maine, with a portion of New Hampshire.

While the execution of this map is as good as could be expected, from the inaccurate state of the surveys of the country, still, it is very defective in other respects.

1st. The scale on which it is constructed, is entirely too small in order to represent the peculiarities of the country.

2d. Nova Scotia and Prince Edward Island, should have been embraced, with as much as could have been conveniently given of the circumjacent country.

3d. The price, thirty shillings, is far beyond the means of the mass of the people, the schools, etc., of the country.

Such are the leading objections to this map. However, we have our own way of doing things, and probably it is best to let us alone. The next map we get up may be of the United States.

We have long considered a good map, detailing the peculiarities of the lower Provinces, of primary importance to our school-going population. Amongst our secular institutions, nothing is more important, nothing would better tend to develope the resources of these Provinces, and lead those of other countries to render assistance. But here we are brought to a stand-still All we have is a small picture of New Brunswick, with a patch of each of the other lower Provinces.

Goodriche's Comprehensive Geography and History, 1855

This comprehensive Geography contains 270 pages, 153 of which are devoted to a description of the world, "ancient and modern;" 113 pages to a description of the United States, and *four* pages only devoted to a description of British North America, a country much larger than the whole Union.

Under the caption British America, it says of the inhabitants—"The whole northern part of British America is occupied by tribes of savages. Further south, in the middle regions, there are numerous trading posts, and bands of white hunters and trappers, belonging to the Hudson's Bay Company, which spread over the country. Along the Gulf and River St. Lawrence and the Great Lakes, are the principal white settlements. To the West, from Great Slave Lake south to the United States, there are tribes of Chippewas, Pristeneaud, Creeks, and other Indians."

A stranger to British North America would conclude from reading the above extract, that the inhabitants consist of tribes of Indians, tribes of savages, and bands of white hunters and trappers. This is the manner in which our neighbours of the Union speak of a territory larger than their own—a country with national resources, and the tonnage of whose shipping is fifth in the scale of the world's nations. This is the way they speak of a country containing over three millions of intelligent beings nearly as many as Sardinia, of Italian notoriety, or Portugal, or Holland, and more than double that of Denmark, Hanover, Tuscany, Norway, Baden, or Greece, exclusive fo the Indian and savage tribes. And these three millions of intelligent beings are located in large cities, towns and villages, surrounded by extensive fertile domains, producing a vast amount of food for man and beast. Thus they speak of a country possessing a greater extent of railroads and telegraph lines than one fourth of the trans-Atlantic world, with all its greatness, a country whose forests are clothed with a growth of most valuable timber, with mines,

rich, vast, and varied, with many thousands of miles of seaboard, and rivers everywhere penetrating the country for hundreds of miles, and one (the St. Lawrence) for thousands of miles; a country with spacious lakes, affording an inland navigation not surpassed by any other country on the face of the globe; and a country whose waters teem with every variety of the best fish.

In speaking of Russian America, it says that "the whole population is supposed to be ten thousand, fifteen hundred of whom are Europeans, and the rest savages."

Now it is well known that the inhabitants of Russian America number seventy five thousand.

Such is the kind of nonsense our youth are learning; and the Geography published by the National Board of Education is still worse if possible; and we could refer to others in more common use in our Common Schools, than either of these works, where the most absurd and contradictory statements imaginable are made concerning British North America.

All go to show the necessity of the inhabitants of these Provinces looking after their own interests, and reporting their own country, and not leave it to others to undertake. A good Geography of British North America would be a desideratum.

Prince Edward Island School Loan.

Abstract of an Act for the encouragement of education, and to raise funds for that purpose, by imposing an additional assessment on land in this island, and on real estate in Charlottetown and Common, and Georgetown and Common:

Sec. 1st—Authorises the Lieutenant Governor-in-Council to appoint seven persons to constitute a Board of Education, three being a quorum; four quarterly meetings to be held on certain notice, with such other meetings without notice as may be necessary.

2nd and 3rd.—A Secretary is to be appointed with a salary of thirty pounds, and each member of the Board receives four pounds yearly.

4, 5, 6, and 7.—Provides for the examination of District Teachers by the Board, and their certificates. *Classification.*—First class to teach book-keeping, English Grammar, reading, writing, arithmetic and geography. Second class, in addition to the above branches—algebra, geometry, trigonometry, mensuration, land surveying, navigation and geography, with the use of the globes, and to produce certificates of their capability.

8.—Disqualified Teachers may attend Central Academy for six months free of charge.

9 and 10.—Duties of Board and visiting of schools defined; to prepare forms and regulations, extra of Act, Instructions, &c.; to cancel Teachers' certificates in case of misconduct.

11 to 16.—Refers to some minor details, as regards school houses, etc.

17.—Secretary to register School Districts—particulars being sent to him by the inhabitants or teachers; number of school districts not to exceed two hundred, without special sanction of the Government.

18.—Inhabitants to appoint five Trustees in each district annually, of whom three shall be a quorum—to examine schools quarterly, to direct discipline, etc., and to give certificates.

19.—District Teacher to transmit to Secretary notice of his engagement, countersigned by at least three Justices; engagement to be for twelve months.

20.—In each District a majority of Trustees may assess the inhabitants, house holders resident for six months, in a sum to provide books, etc.

21 and 22—Refers to details.

23.—Visitor of Public Schools to be appointed, who shall write all

schools twice a year, to assist the Board, call meetings of Trustees, report to the Board the condition of schools, etc.; salary £200 per annum.

24.—Board to report to Legislature.

25.—School houses to be three miles apart, except by special act of Government.

26.—Teachers entitled to allowance to have 30 scholars, except in certain cases.

27 to 33—Refers to minor details.

34.—Teacher to keep a journal, containing names and ages, progress and attendance of pupils—to be open to inspection and forwarded to Secretary.

36. * * Allowance to first class teachers £45, and second class £50 per annum.

37. -Teachers of second class, if teaching Latin, to receive ten shillings per scholar so taught, but not to exceed £60 in the whole. Returns to be made.

38.—Female Teachers may be employed, at £30 per annum, to teach female scholars and boys under twelve.

39.—French Acadian Teachers, on producing certificates, to receive £35 per annum.

41.—One second class teacher allowed for Charlottetown to receive £75, and one first class £60, per annum.

42.—Two female teachers allowed for Charlottetown at £40.

43 to 45.—Unimportant.

46.—Georgetown to have one teacher at £70, and one female teacher at £35.

47 to 49—Refers to special provisions as to meetings in Georgetown, etc. Like payment as in Charlottetown.

50.—£500 may be advanced by Government for the purchase of books, maps, etc., to be supplied to schools monies arising from sale to be again laid out.

52.—Allowance of £5 to Districts requiring assistance in building school houses.

53.—All children above five entitled to attend district schools.

55—Tax of one half penny per acre, or four pence half penny per hundred acres to be paid on improved or unimproved township lands, in addition to other taxes; two shillings on every pasture lot in Charlottetown, and eight pence per every pasture lot in Georgetown.

56.—Additional tax of one penny per acre on reserved lands in Royalty of Georgetown.

57.—Payment to be made together with the land tax.

58.—Tax of five shillings additional on dwelling houses, stores, mills, &c.

The remaining part of the Act refers to the manner of collecting the school revenue, and how it is to be appropriated.

Education in New York.

For this State, exclusive of the cities, there were in 1858, 11,327 school districts; in the several districts there were 11,276 school houses, and 262 in the cities. There were 1,238,175 children between the ages of four and twenty one, entitled to common instruction. The entire number who attended during the year was 842,137; 26,153 teachers were employed. The total receipts of the public schools during the year were £948.437. The school libraries contain 1,402,253 volumes.

Canada.

This Province l es between the meridians 57 50 and 90 west, and the parallels of 42 and 52 north. It is 1300 miles from East to West, and 700 from North to South, and contains 348,000 square miles. It is said to derive its name from the Iroquois word "Ranata," signifying a collection of huts. Canada is a plain stretching from the two ranges of hills, one on the North the other on the South.

LAKE ERIE is 244 miles long, 58 broad. 658 miles in circumference, and 65 feet above the level of the ocean; 270 feet deep, and 30 feet lower than Lake Huron.

LAKE ONTARIO, signifying "the beautiful," is of an eliptical shape, and is 172 miles long; its surface is 230 feet above the level of the sea, and is 100 fathoms deep.

LAKE CHAMPLAIN is 120 miles long.

LAKE SUPERIOR is 360 miles long; its surface is 127 feet above the level of the Atlantic; the bottom of the basin is said to be 500 feet below the surface of the ocean. It is fed by 220 tributary streams, of which the St. Louis is 150 miles long

LAKE HURON is 240 miles long, by 220 broad, and nearly 1000 miles in circumference, and from 900 to 1000 feet deep.

QUEBEC is 360 miles up the Saint Lawrence, and the salt water approaches to within 20 miles of the City.

MONTREAL is 180 miles above Quebec. The St Lawrence is navigable at Montreal for vessels of 600 tons.

The Niagara Falls Bridge has 800 feet of a span, and is 230 feet above the water.

The Ottawa River, a tributary of the St. Lawrence is over 2000 miles in length.

The Victoria Bridge, at Montreal, is two miles long, except 150 feet.

The Pleasures of Knowledge.

"How charming is divine philosophy!
Not harsh and crabbed, as dull fools suppose,
But musical as is Apollo's lute,
And a perpetual feast of nectared sweets,
Where no crude surfeit reigns."

So sung Milton two centuries ago, and long before that date Plato had announced that "the world is God's epistle to mankind." It is the grand book in which all may read, and whose pages are so full of varied interest and genial knowledge that the being who, having the power, neglects to study it, surely may be written down an ass, for he deprives himself of an enjoyment such as no other pursuit can give.

We are sometimes inclined to be vexed with our race when we find them all toiling after every vain fancy, some bent upon one ambition, some another, and but a minority digging in the deep mine of nature for the grandest of all possessions—t Truth. Granted that its gold is not yellow, nor its silver white, for its treasures have not the colour of material wealth, but they are as glorious and as beauteous as the sparkle o the diamond and as lasting as the hills. Science clothes not her votaries in purple and fine linen, but dresses them in lovely flowers or in iridescent shells, and gives as her reward a contented mind and a pure soul. The poetry of science sometimes flashes in the oration of a professor or in the pages of a book, but her truest epic is written upon all materiality, which proclaims that in all things there is a law which, when known and applied, shall make man happier, better and more truly human.

By the investigation of the laws which govern the objects that are all around us, the motions of the planets,

the relations of life and health, the destiny of man, and the glory of the Deity, are better understood; and the lighting of a cottage, the building of a palace, or the cooking of a dinner are better performed. We can never be in any position in which knowledge is not of value to us, and we can never prophecy the moment at which we may most require it. Indeed many of us only know that there is more to be known than occurs to us in the daily round of business life, by the discovery that something we do not know is calculated to make us richer or give us more ease. "But," exclaims many a petulent person, "how shall I study without an instructor, or how investigate without apparatus?" Foolish notions! the best workman always uses the simplest tools. Have you eyes, ears, nose and hands? Then you are provided with apparatus, and memory is the tablet on which to write down your impressions. Each one of us is better furnished than a college laboratory or a professor's lecture room, and all that we have to do is to learn the use of our apparatus; and there is no place in the universe where man cannot find some object to interest, some study to pursue.—Goldsmith found time to observe nature and record his thoughts, and in glowing language he tells us that "the blushing beauties of the rose, the modest blue of the violet, are not in the flowers themselves, but in the light which adorns them, Odor, softness, and beauty of figures are their own, but it is light alone that dresses them up in their robes, which shame the monarch's glory." As a concluding incentive to our readers to study for themselves, as well as to read books and scientific periodicals, we will give a quotation from a lecture by Prince Albert of England. "Man," observes this eminent *savant*, "is approaching a more complete fulfilment of that great and sacred mission which he has to perform in the world. His reason being created after the image of God, he has to use it to discover the laws by which the Almighty governs his creation, and, by making these laws his standard of action, to conquer nature to his use—himself being a divine instrument. Science discovers these laws of power, motion, and transformation; industry applies them to the raw material which the earth yields us in abundance, but which becomes valuable only by knowledge."

Oh! that all would study nature more, and think of themselves a little less; then we should indeed be a people of kings, whose empire would be the world and whose subjects would be all created things!—*Scientific American.*

Agriculture—Its Importance.

No one should despise the occupation of husbandry after reading the following remarks of a correspondent of the Valley Farmer:

Agriculture is the body, whilst the other professions are members; and although the body and members are mutually dependent and reciprocally useful to each other, the body can exist without the members much better than the members can exist without the body. For the purpose of comparison, agriculture may be considered as a *trade*, an *art*, and a *science*. The trade is mechanical, requiring muscular strength. It is imitative—it is to do a thing as one has been taught to do it before. The ox, in a measure, acquires it. He knows his master and his master's crib. He treads the accustomed furrow, turns at the headlands, and obeys the driver's commands.

The art implies co-operation of the mind with physical power. The mind contrives; it is a lever which greatly assists and abridges the labor of the hands. The mind, like the soil, makes returns in proportion to the culture which is bestowed upon it. Both are

unproductive without culture. The mind is improved by observation and reading, which makes it familiar with the best models of practice, and enables it to profit by the improvement of others.

The science teaches the laws and proportions of inorganic matter—as of rocks, earths, manures, &c., &c.; of organic matter, as animals and vegetables; of their structure, food and uses; and the agency of heat, water, air, light and electricity, in their development and maturity; the employment and adaptation of these matters for the best uses of man. It contradicts the experience of ages and the labours of nations upon these interesting subjects, and makes them subservient to our wants and our comforts. The science is a collection of facts and leading truths, illustrated in practice and confirmed by experience.

Land and labor are the legitimate sources of public wealth. The first, to be productive, must be cultivated; and the labor of doing this is abridged by the culture of the mind, which guides its operations.

Without agriculture there is no wealth Gold and silver are not wealth —they are its convenient representatives. Commerce produces no wealth —it simply exchanges it. Manufactures and the arts re-combine it.— Agriculture is the prolific mother of wealth. The rest simply handle it when produced and delivered into their hands. The earth itself, originally, spontaneously produces wherewith to keep the race of man from starving—only whilst he is making ready to till the soil. Without it he soon degenerates into a wild animal, living here and there in small squads, a little superior to the other beasts of prey. The earth breeds savages.— Agriculture breeds enlightened nations. It breeds houses and ships, temples and seminaries; it breeds the manufactory; sculpture, painting and music are its offspring. It would be folly to speak of the existence, or beauty, or power of any of these things, without agriculture.

The pulpit, the professor's chair, the scientific laboratory, the tripod, the library, the ship, the trip-hammer, the loom and the anvil —all would go down in one generation. It is by the superabundant produce and stability of agriculture that all things exist. Nor gold, nor silver, nor diamonds could replace it. The state of husbandry, in any country, is the test of its enlightenment. The thermometer of civilization rises and falls as drives the plow. "You must send the plow," exclaimed a man who had travelled all over Christian missionary ground in heathen lands. A barbarian nation needs but to be plowed up—deep, subsoiled, continued, sowed, planted, and the inevitable harvest will be an enlightened empire. A practical, working agricultural society will dig barbarism and mental and physical and spiritual poverty out of a nation, as effectually as any powerful grubbing machine will "shake out" the stubborn stumps.

A few centuries ago, a learned writer describes the times in these words: "Rude were the manners then; the man and wife ate out of the same trencher; a few wooden-handled knives, with blades of rugged iron, were a luxury for the great; candles were unknown. One, or at most two, mugs of brown earthenware, formed all the drinking apparatus in a house. Rich gentlemen wore clothes of unlined leather. Ordinary persons scarcely ever touched flesh meat. In noble mansions, a little corn seemed wealth."

This is history. Any one of our neighbours, if compelled now to live as the highest and wealthiest of mankind lived in those days—such a neighbor would excite our sympathies. We would consider him as good as starving; would carry in gifts to supply his wants, and start a subscription among our friends to feed and clothe him.

A few hundred years ago, and all

the wealth of a nation could not buy a loaf of bread, such as you will see on any farmer's table at the present time. The fine flour could not be made. The table of our farmer is much more princely in its furnishing than was the table of a monarch then. We have now in common use several species of most delicious fruits then unknown. We raise several kinds of grain not then in use. The very word corn, then applied to wheat and barley, is now applied to a grain then undiscovered. Men then lived upon a few vegetables, with fish on extraordinary occasions; and at their greatest feasts, their chief viands were flesh and wine. Their crops, as well as in the palmiest ancient times, rarely yielded over ten or twenty fold.—Now a hundred fold is considered a very small return Then, as in the ancient world, they gathered the harvest by pulling up the stalks, or by almost as slow a process of reaping with the sickle. Compare these methods with the great reaper now in use! that sweeps over acres in an hour, and leaves the glorious harvest on the fields of a farm in a day. Thus, formerly, the patient ox slowly trampled out the grain, week after week, and the winds of heaven and the fan in the hands of the laborer slowly and imperfectly separated the kernel from the chaff and straw. Now, the mighty thresher, with tumultuous whirl, takes into its crushing teeth thousands of sheafs in a day, and scattering the emptied heads, and straw, and chaff, in rich streams, the separated golden grain rushes out upon the ravished sight, all ready for the marts of trade —for food for man and fowl and beast, and for the hopper and the stones, swiftly driven by the vast and ponderous wheel. From its mighty pouch comes out flour white as the driven snow, which makes the kneaded bread better than the fabled ambrosia of the gods.

In short, Agriculture CLOTHES all—Agriculture FEEDS all.

Agriculture in New Brunswick.

Having within the last few months made a hasty tour through a portion of Western New Brunswick, we were struck with the sluggish and languid appearance which agricultural operations everywhere presented. And in answer to the "why is it so?" we were repeatedly told that New Brunswick is not worth living in, and is not capable of sustaining, however well cultivated, a population equal to the most inferior State of the Union With this idea of the capabilities of this Province, we are not prepared to coincide. On a comparison of Agricultural statistics—New Brunswick with many of the States—it is evident that we far exceed, in the growth of potatoes, and many of the cereals, especially of oats; and it only requires industry, system, and the expenditure of a moiety of the capital expended in shipbuilding and other pursuits, to make New Brunswick not only self-sustaining, but able to sustain several millions of inhabitants, and compare favourably with many of the best Agricultural States of the Union.

We are also told, that the annual emigration from the Province, to California, Australia, New Zealand, Fraser's River and the Western States, far exceeds the emigration to the Province.

And it is also said, that a large portion of the sons of Farmers are abandoning agricultural operations, and either leaving the country, or procuring situations in telegraph offices, clerkships in stores, or situations in the public offices of the country.

Such, we acknowledge, is true to a very great extent. But that these things tell against the agricultural capabilities of a country we do not believe; but that they do tell powerfully against the kind of education, or no education, farmers give their sons, and

the want of interest taken in agricultural pursuits, we firmly believe.

There is a spirit of novelism and restlessness abroad in the country; there is an eagerness to accumulate wealth in a hurry, and without putting the hand to the plough. There is an idea abroad, that a farmer's life is not a respectable one; hence farmers cannot be gentlemen, but slaves. There never was a greater mistake; for if there are grades in callings, the honest and intelligent farmer must stand at the top of the scale. Those young men who thus talk and act, entertain a very mistaken idea of the qualifications that constitute a gentleman; they seem to think, that because farmers generally do not wear broadcloth and starched collars every day, and sit in offices, where the sun will not shine on them by day nor the moon by night, that they cannot be gentlemen; they should remember that "its not the coat that makes the man."

These mistaken notions, along with the wonderful dreams, of the gold of distant regions, which seem to rise in vision before the mind, impels many to leave their homes, the old farms on which their fathers lived comfortably, and their early associations, and undergo untold hardships, in order to secure a portion of that which not more than one in thirty or forty obtain; and what may be still worse, they may suffer the loss of health and character, and may be life itself.

As circumstances change, so should our education also. The dignity of labour should be taught in our schools and colleges, and in our domestic and rural avocations.

We have many other back-draws to agricultural advancement. This country is not sufficiently advanced to keep up a complete division of labour; hence, many of our mechanics, especially in rural districts, have to turn their attention to various pursuits, among which is agriculture. In addition, we have a large, comparatively considered, floating population, consisting of lumbermen, fishermen, ship carpenters, railway navvies, and others, who at one time follow their favourite pursuits, and at other times farm a little, if farming it can be called.

In addition to these draw-backs, perhaps, there is no country where time is thought so little of, as in New Brunswick. Go where you will, and you see able bodied men lounging about, and not working half their time, besides shoals of boys running about the streets and public places chasing, one would suppose, the winds. In fact, it is very doubtful if one half the population is profitably employed.

In place of agriculture standing first among the pursuits in the scale of importance, it is generally considered secondary.

But the time is at hand when necessity will compel us to turn our attention to the cultivation of a portion of the vast tracts, millions of acres, of good land that still lie in a wilderness state in New Brunswick.

We have got to learn, that in order to farm well, we have got to give our youth a good agricultural education—such an education as will enable our farmers to stand on an equal footing with those of other professions. The loftiness and importance of a pursuit, is generally estimated by the dignity of those who follow it. Hence, it is said, "as the man, so is his farm."

To farm well and profitably, requires the expenditure of capital.—Here no one thinks of expending money in agricultural operations; while thousands of pounds are frequently expended in the construction of a single ship; but to expend a similar amount in agricultural operation, would be almost considered a waste of money. If a farmer lays up a few hundreds of pounds, which he may easily do without the expenditure of much means, he generally lets it out to interest, at six per cent, or locks it up in his chest, so that it may be at hand when his neighbour's farm is for sale. And when he adds "farm

o farm,"—he has so much land, that he cultivates none aright. The old motto,

"A little house well filled,
And a little land well tilled,"

is lost sight of.

The following article from a Correspondent of the *Genesee Farmer*, a monthly, which should be in every house in the Province, meets our view:—

ON THE IMPORTANCE TO FARMERS OF A GOOD EDUCATION.

Eds. Genesee Farmer:—I consider the great want of farmers at the present time to be a good education. The importance of this will hardly be questioned. Very few farmers have enjoyed the advantages necessary to qualify themselves thoroughly for their occupation. A few years ago, the public opinion on this matter was quite different from what it is now. Still, there are some who need a little waking up on the subject. There was a time when it was thought that a farmer needed only a pair of hands and strength to use them—the head being of little consequence. While the boy who was intended for a mechanic, a merchant, or a lawyer, was sent to school, and allowed every opportunity for improvement; the one designed for a farmer was kept at home at some kind of drudgery. He needed only to know how to work. That was to be the business of his life, and what need was there for him to learn grammar, or algebra, or geometry, or philosophy? In this way his self-respect and respect for his occupation were destroyed. He was never encouraged to think. It was enough for him to know that his father did so and so, and he was to do likewise and ask no questions. Is it any wonder that he should make a dull man and a "bungling farmer?"

Now what I want to say to the farmers of this country is this: Whatever else you fail to do, don't fail to give your boys a good education, and especially those that are to become farmers. Take some good agricultural paper, and give your boys time to read it, as well as some time for amusement, remembering that "all work and no play make Jack a dull boy." Let them know that a true farmer is as much of a gentleman as the lawyer or the doctor, and sometimes more so, although his clothes may not be so fine, nor his hands so soft. Do not suppose that because your son is to be a farmer he does not need a knowledge of all that is taught in our common schools and academies. If he does not need to use them in his business, the study of them will improve his mind, and not only teach him to think, but to think methodically and correctly; and what is of quite as much importance, he will not feel that he is inferior to his neighbor whose occupation is different from his own. It would be far better if the choice were to be made between a good education and a good farm, to choose the former. Now almost any farmer can give his sons each a good education, while few can give the farms. Let them have the farms, if you can, besides.

Soils.

Alluvial Soils.—Of those, we have first, red marsh; secondly, blue marsh, low marsh or corky dyke; and thirdly, intervale.

1. The red marsh, though varying somewhat in quality, is the best soil in the Province, and much of it compares favorably with the most celebrated alluvial soils of the old and new world. The following analysis of recently deposited marsh mud from Truro, will serve to shew the composition of this kind of soil.

	Moisture,		.5
	Organic matter,		1.5
Soluble in Water.	Chlorine	as common salt,	.095
	Soda,		.116
	Potash,		.013
	Sulphuric Acid	as gypsum,	.073
	Lime,		.061
	Alumina,		.085
	Magnesia,		.094

Soluble in Hydrochloric acid.	Carbonate of Lime,	3.60
	Oxide of Iron,	2.74
	Alumina,	1.20
	Magnesia,	
	Soda and Potash,	.11
	Phosphoric Acid,	.8
	Silicious sand (very fine)	.60
		87.00

It will be observed that, in the above analysis all the substances previously mentioned as contained in fertile soils, are present. This marsh mud is not only a valuable soil, but is carted on upland as an excellent manure. When we take this fact into connection with the circumstance that 87 per cent of the whole is only silicious sand and that only one and a half per cent of organic matter is present, we can appreciate the vast importance of the substances contained in it.

Such soil requires no foreign appliances to render it fertile. It has however one weak point—its small proportion of phosphates; and I suspect, that if there were not occasionally present in it, fragments of fish bones and other similar organic matters which do not appear in an analysis, this deficiency would appear in a somewhat rapid falling off in its productiveness. It is certain, that the best varieties of this kind of soil will bear continued cropping without manure for a very long period. It is however also certain that it gradually runs out, and the owners of the older marshes already have occasion to inquire for the means of restoring its productiveness.

Draining is well known to be essential to the fertility of the marshes, and there are in this Province many valuable tracts of this land in a comparatively useless condition from its neglect. Admitting the sea water to deposit new mud, is also a well known remedy in the case of failing, or naturally poor marsh. It is attended however with the serious disadvantage of causing the loss of several crops.

It seems probable that in the deeper kinds of red marsh, subsoil or trench ploughing might prove very advantageous after the surface has been somewhat run out. There can be no doubt however, that in the heavier kinds of marsh, it would require to be accompanied by very thorough drainage.

It may also be deserving of inquiry if the title drains would be more serviceable than the open ditches in common use. Titles could be very easily and cheaply made of the marsh mud itself, and when once laid, would require far less attention than ditches; and could be laid in any direction, and in any number, without interfering with the working of the soil.

Lastly, the composition of the marsh mud indicates that the application of bone-dust would probably be attended with the most marked results, particularly, in increasing the certainty of grain crops, and in producing the more valuable kind of grasses—Guano would have a similar effect: but a good dressing of bone-dust would be more permanent in its effects. I would recommend to owners of poor or worn out marsh, to try the experiment, and calculate from the increase of crops, whether it would not be remunerative.

2. Blue marsh, sometimes called inner marsh, low marsh, corky dyke, grey marsh. This forms the subsoil of the red marsh, and generally occurs in a belt along the inner margin, next the upland, where the surface is lower than the outer edge, in consequence of the tides depositing the coarser mud near the channels, and finer mud in smaller quantity near the upland. In those parts of the Province where the tides are only of ordniary height, all the marsh that exists is either of this kind, or boggy marsh, composed almost entirely of vegetable matter. The blue marsh usually contains more vegetable matter than the red, and assumes the character of a boggy swamp. It emits a fetid smell when recently turned up, and the water oozing from it usually stains the ground with a rusty colour. It has the appearance of being a rich soil, but, though it produces, in its natural state, crops of coarse grass when broken up, it is of little value.

Its chemical composition gives the

true reason of its comparatively worthless character, and also suggests a remedy. The vegetable matter present in this kind of marsh acting on the stagnant sea-water, has decomposed the sulphate of soda, of which a small quantity is present in the tide-water, and has set free its sulphur, in the form of sulphuretted hydrogen, which acting on the oxide of iron in the mud, converts it into sulphuret of iron, and changes its colour from red to grey. The sulphuret of iron remains unchanged, while submerged or water-soaked, but when exposed to the air, it passes into sulphate of iron or green vitrol; a substance poisonous to most cultivated crops, except the oat, which can put up with a little of it. Hence the bad effects of disturbing the blue marsh—hence also the rusty colour of its water. Land in this state can be easily tested by drying a small piece of it and making it red hot in the fire; on taking it out, it will be found to emit a strong sulphurous smell, and on cooling its red colour will be found to be partially restored.

The remedy is draining and liming; and such land will usually stand, without injury, a heavy liming. Draining admits air and takes off the saline water. Lime decomposes the sulphate of iron, and forms sulphate of lime and oxide of iron, both useful substances. The cause and cure of the blue marsh thus involves a series of chemical changes; the last of which may be represented as follows:

Sulphuric Acid and Oxide of Iron, with Lime,	converted into	Sulphuric Acid and Lime, with Oxide of Iron.

When the blue marsh is too low to admit of proper drainage, the only mode of improving it is to dig trenches to the tide channels, and thus admit the muddy tide water to deposit over it a coat of red mud. Both of these methods have already been employed with success in some parts of this Province.

Though the blue marsh is by itself so unproductive, yet those varieties of it which contain a good proportion of vegetable matter, when drawn out and composted with lime or marl, form an admirable top dressing for upland grass.

3. Intervals or fresh water alluvium occurs along most of our rivers, in variable quantity and quality; but is generally a fine and productive soil. It requires the same management with upland soils, and except where it has a loose gravelly subsoil, would often be improved by draining. It is lamentable to see, in the older settlements, so much of this valuable soil almost ruined by an exhausted system of cropping.

It is worthy of notice that ever since the first cultivation of the alluvial soil of the Euphrates and the Nile, irrigation by running water has been found to be a most efficient means of promoting and restoring the fertility of this kind of land. Many of our intervales are annually overflowed by freshets, and sometimes with very injurious results. But it is a matter deserving of inquiry, whether a regular and systematic admission of the water of the rivers and the tributary brooks, might not repay its expense, by its beneficial effects on the crops. Muddy water let in, in this manner, would not only top-dress the soil, but tend to elevate it above the reach of the freshets, and even clear water flowing gently over the surface for a limited time, is known to be highly fertilizing, though the theory of its operation is not well understood.

Some useful facts on this subject will be found in Jackson's treatise on Agriculture and Dairy Husbandry.—*Times Magazine.*

On Coating Seeds with Manure.

Several letters have lately appeared in a Glasgow paper from a Mr. John Ronald, a merchant of that city, detailing the result of several experi-

ments he had made by steeping grain in liquid manure, so as to coat them over with it, previous to their being sown. He states his plan to be to make every seed carry with it to its bed in the soil some good manure, which has an immediate effect on the growth of the plant, and greatly increases the crop. The experiments were tried on some small plots of land near Glasgow, and the manures used were a solution of lime in water, a solution of barn manure, fowls dung and water, the deposit obtained from city sewer ge, and a mixture of soot and water. He does not state which of these mixtures was the most successful, but gives the increase from 20 to 35 per cent over seed not so prepared. As an addition to either mixture he recommends a small quantity of sugar, and he proceeds to show that saccharine matter is an ingredient in wheat and other grain and contributes mainly to the nourishment of the young plant. An experiment with guano was not successful, but few of the seeds germinating.

The mode of applying the liquid is as follows:—Take a tub about 30 inches over and 20 deep; empty into it a boll (four bushels) of wheat; take two pounds of sugar, bruise any lumps there may be in it, and sprinkle it on the top of the seed in the tub. Take another smaller tub, put into it six gallons of water, and mix soot with it until it is as thick as good cream—a man rubbing the soot and water against the side of the tub with a stiff broom will mix it in a few minutes—then with a jug distribute the solution slowly on the top of the sugar and wheat. The liquid will then be about two inches above the top of the wheat; stir the whole with a wooden ladle several times within the first four hours, but not after that; let it remain in the solution not less than 24 hours, by which time the seed will have absorbed all the liquid, and although in a damp state, it will be ready for sowing; but if the weather is not favorable, the seed may be left in the manure for forty, fifty or sixty hours, every seed will then be black with soot. Other manures and other grain to be treated in a similar manner. The whole of the seed thus prepared sent up a large number of stems. From one root, the seed of which was coated with hen pen, there were —— ears, the produce being not less than 1100 grains, but it was on garden ground and good soil. Of the plants of wheat sent up, not one was thrown out of the ground by the alternate frosts and thaws of winter because the roots were large and had a good hold of the ground.

The plan was afterwards tried on the estate of the Earl of Eglinton on a larger scale. The wheat was coated with soot and sugar and the results were that the grain appeared sooner; it tillered better, it covered the clod sooner: it grew more luxuriantly; it burst into ears sooner; the flower on it was earlier; and when cut it produced fully one fifth more stocks than the rest of the field.

Beans and peas treated in the same manner gave 47 per cent. greater increase than the seed sown without the coating of manures.

Literature.

"The Guardian" is the title of "a monthly Magazine of Education and General Literature," edited by R. Aitkin and E. Manning, St. John, N. B.; printed by Barnes & Co. Price one dollar.

The various articles comprised in the work, January Number, are ornate in language, and present entertaining delineations of the subjects treated of. We wish the enterprising editors every success.

"How to Live and Breathe;" a monthly Magazine, published in Boston; edited by Moses Brown, M. D. Price 6s

This work contains many useful hints on the restoration and preservation of health; it should be in every family.

The remarks on New Brunswick are to the point. Such remarks published in a foreign country, by one who "saw and heard" for himself tend to perpetuate good feeling, and make known our vast and varied resources.

Any of our readers desirous of procuring either or both the above named works,—we will take pleasure in forwarding their subscriptions and ordering the works.

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The French Department is under the care of Madame Eugenie Jeanpert, recently from Paris, who teaches on the Ollendorff system, and also gives lessons in Music. Daily conversation in French is insisted on.

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AMHERST, 1860. C. E. RATCHFORD.

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